

1. Solve the equation below. Then, choose the interval that contains the solution.

$$-9(3x + 11) = -5(17x + 8)$$

- A.  $x \in [-2.21, -0.44]$
- B.  $x \in [-3.27, -2.12]$
- C.  $x \in [2.39, 2.83]$
- D.  $x \in [0.73, 2.04]$
- E. There are no real solutions.

2. Find the equation of the line described below. Write the linear equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Perpendicular to  $6x - 7y = 6$  and passing through the point  $(-5, 4)$ .

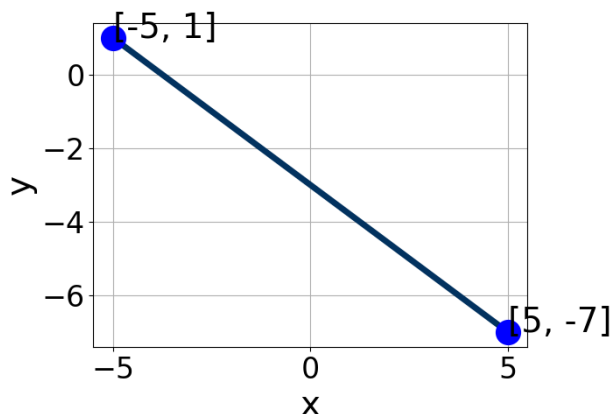
- A.  $m \in [-2.54, -0.89]$   $b \in [8.92, 9.19]$
- B.  $m \in [-2.54, -0.89]$   $b \in [1.36, 2.36]$
- C.  $m \in [-2.54, -0.89]$   $b \in [-2.49, -1.7]$
- D.  $m \in [0.1, 2.72]$   $b \in [9.7, 10.7]$
- E.  $m \in [-0.93, -0.21]$   $b \in [-2.49, -1.7]$

3. Find the equation of the line described below. Write the linear equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Perpendicular to  $8x - 5y = 6$  and passing through the point  $(7, -9)$ .

- A.  $m \in [0.59, 0.76]$   $b \in [-14.38, -10.38]$
- B.  $m \in [-0.9, -0.3]$   $b \in [-20, -14]$
- C.  $m \in [-0.9, -0.3]$   $b \in [-8.62, -3.62]$
- D.  $m \in [-0.9, -0.3]$   $b \in [1.62, 9.62]$
- E.  $m \in [-1.83, -0.92]$   $b \in [-8.62, -3.62]$

4. Write the equation of the line in the graph below in Standard Form  $Ax + By = C$ . Then, choose the intervals that contain  $A$ ,  $B$ , and  $C$ .



- A.  $A \in [1.8, 6.1]$ ,  $B \in [5, 10]$ , and  $C \in [-17, -7]$
- B.  $A \in [-1.9, 2.9]$ ,  $B \in [1, 3]$ , and  $C \in [-3, -1]$
- C.  $A \in [-1.9, 2.9]$ ,  $B \in [-3, 0]$ , and  $C \in [1, 6]$
- D.  $A \in [1.8, 6.1]$ ,  $B \in [-9, -4]$ , and  $C \in [10, 18]$
- E.  $A \in [-4.1, -2.3]$ ,  $B \in [-9, -4]$ , and  $C \in [10, 18]$

5. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{4x + 6}{3} - \frac{7x + 7}{2} = \frac{-7x - 3}{8}$$

- A.  $x \in [-1.7, -0.1]$
- B.  $x \in [1, 2.1]$
- C.  $x \in [0.1, 0.6]$
- D.  $x \in [3.8, 5.3]$
- E. There are no real solutions.

6. First, find the equation of the line containing the two points below. Then, write the equation in the form  $y = mx + b$  and choose the intervals

that contain  $m$  and  $b$ .

$$(-4, -9) \text{ and } (-6, 11)$$

A.  $m \in [-11, -7]$   $b \in [-59, -45]$

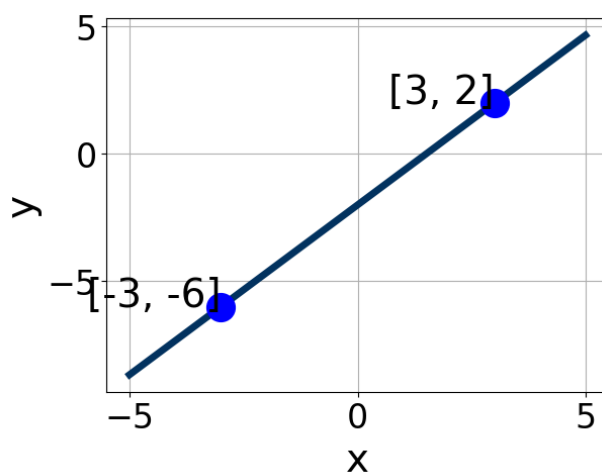
B.  $m \in [-11, -7]$   $b \in [-8, 2]$

C.  $m \in [-11, -7]$   $b \in [48, 58]$

D.  $m \in [9, 16]$   $b \in [69, 76]$

E.  $m \in [-11, -7]$   $b \in [15, 23]$

7. Write the equation of the line in the graph below in Standard Form  $Ax + By = C$ . Then, choose the intervals that contain  $A$ ,  $B$ , and  $C$ .



A.  $A \in [-2.8, 0.3]$ ,  $B \in [-1.56, -0.72]$ , and  $C \in [1.9, 5.3]$

B.  $A \in [-2.8, 0.3]$ ,  $B \in [-0.23, 1.48]$ , and  $C \in [-4.6, -0.6]$

C.  $A \in [-5.5, -1.4]$ ,  $B \in [1.28, 4.39]$ , and  $C \in [-7.8, -5.5]$

D.  $A \in [1.5, 5.9]$ ,  $B \in [-4.02, -2.82]$ , and  $C \in [5.5, 8.2]$

E.  $A \in [1.5, 5.9]$ ,  $B \in [1.28, 4.39]$ , and  $C \in [-7.8, -5.5]$

8. Solve the equation below. Then, choose the interval that contains the solution.

$$-18(3x + 7) = -17(10x + 13)$$

- A.  $x \in [-3.46, -2.92]$
  - B.  $x \in [-1.84, -0.97]$
  - C.  $x \in [-1.35, -0.48]$
  - D.  $x \in [2.86, 3.64]$
  - E. There are no real solutions.
- 

9. First, find the equation of the line containing the two points below. Then, write the equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

$$(-3, -4) \text{ and } (4, 6)$$

- A.  $m \in [1.1, 4.2]$   $b \in [-1.52, -0.75]$
  - B.  $m \in [1.1, 4.2]$   $b \in [-0.47, -0.2]$
  - C.  $m \in [1.1, 4.2]$   $b \in [1.45, 2.09]$
  - D.  $m \in [-4.7, 1.2]$   $b \in [11.62, 11.75]$
  - E.  $m \in [1.1, 4.2]$   $b \in [0, 0.79]$
- 

10. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-3x + 5}{3} - \frac{8x + 8}{7} = \frac{-5x + 7}{4}$$

- A.  $x \in [-0.5, 0.1]$
  - B.  $x \in [-11.5, -10.9]$
  - C.  $x \in [0.9, 1.9]$
  - D.  $x \in [-3.1, -1]$
  - E. There are no real solutions.
-